**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

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| In re application of | Docket No: Q62082 |
| Fumihiro SONODA | |
| Appln. No.: 09/774,013 | Group Art Unit: 2624 |
| Confirmation No.: 2278 | Examiner: Patrick L. EDWARDS |
| Filed: January 31, 2001 | |

For: IMAGE PROCESSING METHOD

**REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41**

**MAIL STOP APPEAL BRIEF - PATENTS**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.41, Appellant respectfully submits this Reply Brief in response to the Examiner's Answer dated May 23, 2006. Entry of this Reply Brief is respectfully requested.

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## STATUS OF CLAIMS

The status of the claims remains unchanged as set forth in the Appeal Brief filed March 16, 2006.

Claims 1-22 are pending in the present application and stand finally rejected. The rejection of claims 1-22 is being appealed.

## GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-22 are pending in the present application and stand finally rejected.

Claims 1-22 have been rejected under 35 U.S.C. § 103(a) as being anticipated by Stavely et al. (U.S. Patent No. 5,969,372; hereinafter "Stavely") in view of Yajima et al. (U.S. Patent No. 4,074,231; hereinafter "Yajima").

## ARGUMENT

Appellant now responds to the new points raised by the Examiner in his Answer.

**1. Stavely does not disclose the claimed preprocessing**

On page 3, paragraph 3 of the Examiner's Answer, the Examiner asserts that Stavely, col. 5, lines 60-65, discloses "performing preprocessing for the blemish elimination processing on said defective image while reading photoelectrically said image." Appellant notes that "said image" refers to "reading photoelectrically said image to obtain an actual image" as recited in claim 1. (See Appellant's specification at page 19, line 20 to page 21, line 9). In particular, the Examiner asserts that the reference describes processes that limit the image correction (i.e. the blemish elimination processing) that is to be later performed on the actual image. The Examiner asserts that these processes are "preprocessing" because they are performed prior to the actual image correction and these preprocesses are performed on the defective image.

However, Appellant submits that the aspect of the reference cited by the Examiner does not disclose preprocessing as claimed. As discussed on col. 5, lines 45-50, image processing is used to remove image areas from the white light scan (normal image scan) corresponding to low intensity areas in the infrared scan (defective signature scan). Therefore, it is evident that the image processing of Stavely (preprocessing as cited by the Examiner) is performed to obtain an actual image free of low intensity areas as opposed to preprocessing. The Examiner asserts that the image processing (preprocessing as cited by the Examiner) is performed prior to the actual image correction and that such image processing is performed prior to the performance of future

image processing to be performed. (See Examiner's Answer at page 5, para. 10). However, contrary to the Examiner's assertion, it appears that the image processing of Stavely is the actual image correction. In particular, there does not appear to be any teaching or suggestion of any future image processing to be performed. Any further processes would not relate to the image but a different image. Therefore, the Examiner's reference to a future process to set a reference for a "preprocess" in Stavely is improper.

**2. Stavely does not disclose performing preprocessing on the defective image**

Assuming *arguendo* the image processing of Stavely discloses the claimed preprocessing, the image processing of Stavely (preprocessing as cited by the Examiner) is performed on the normal image (white light scan) and not on the defective image (infrared scan). **The defect signature is then used to suitably alter corresponding areas in the first scan (normal image scan).** See Col. 1, lines 26-35. Contrary to the Examiner's assertions on page 6 of the Examiner's Answer, the image processing is being performed on the actual image and not the defective image. The defective image of Stavely is used to alter the actual image. Therefore, preprocessing is not performed on the defective image (infrared scan as cited by the Examiner).

The Examiner asserts (See Examiner's Answer at page 6, para. (c)) that col. 5, lines 60-65 discloses "[k]nown image processing techniques such as area size thresholding, feature clustering, edge detection and boundary following, and region extraction methods may be used to limit image correction to larger features and **to ignore small scattered points of low intensity and noise in the infrared scan.**" However, this merely discloses that small scattered points of low intensity and noise in the infrared scan will be ignored when correcting the actual image.

Further, col. 5, lines 60-65 of Stavely does not disclose performing image processing techniques on an infrared scan. In the image of the infrared scan, the image itself on a film is not read, but merely dust, a blemish or the like is read. Therefore, it is impossible to use feature clustering, boundary following and region extraction methods on a defect image in which the scattered dust and blemishes appear as points. To limit an image correction to large features means to perform the image correction limited to the large image features in the actual image. Accordingly, this aspect of Stavely discloses that the known image processing of area size thresholding, feature clustering, edge detection and boundary following, and region extraction methods are performed on the actual image by ignoring small scattered points of low intensity and noise detected by an infrared scan and limiting the image correction of the actual image to larger features.

Therefore, this aspect of Stavely does not teach performing image processing (preprocessing as cited by the Examiner) on a defective image.

**3. Stavely does not disclose performing preprocessing while reading photoelectrically said image**

Moreover, as discussed in Stavely, col. 2, lines 26-42, col. 4, lines 16-32 and col. 5, lines 45-50, a normal image scan is performed using white light to obtain an image to be corrected and a defect signature scan is performed to obtain an image of the surface defects. Therefore, Stavely does not disclose "performing preprocessing ...**while reading photoelectrically said image**." In particular, the image processing (preprocessing as cited by the Examiner) is performed **after** obtaining a normal image and a defective image.

To the extent that the Examiner contends that the ordering of the defect and image reading are immaterial and therefore, are at least suggested by Stavely, Stavely does not further teach the temporal relationship as claimed for reading the image and performing preprocessing (in relation to a defect). If, as the Examiner concedes can be the case, the image scan precedes defect scan in Stavely and thus clearly cannot meet this temporal relationship of the claims.

**4. Yajima does not disclose preprocessing comprising edge enhancement processing**

As recited in claim 1, the preprocessing, comprising edge enhancement processing, is performed on the defective image. The line edge enhancement performed is Yajima is performed on an input signal S and not on a defective image for blemish elimination processing.

**5. The combination of Yajima with Stavely is not obvious**

On page 8, para. (g) of the Examiner's Answer, the Examiner asserts that Appellants have not refuted the Examiner's motivation for combining Yajima with Stavely.

As previously submitted, Stavely disclose image processing techniques used to limit image correction to larger features of the image ignoring small scattered points of low intensity and noise in the infrared scan. On the other hand, edge enhancement processing is a process to emphasize a sudden change in image signals (noise and regionally varying scattered points). If edge enhancement processing is performed on the defective image as an image processing in Stavely, the small scattered points of low intensity and noise in the infrared scan, which should be ignored according to the description of Stavely, will be emphasized to an unignorable level. This would consequently lead to a failure in limiting image correction to larger features of the

image, as described in Stavely, because of enhanced small scattered points of low intensity and noise in the infrared scan image. Thus, it is clear that the edge enhancement processing cannot be included in the image processing described in col. 5, lines 60-65 of Stavely. Therefore, the combination of Yajima with Stavely is not obvious.

**6. The Examiner's citation of the same element of Stavely for teaching distinctly different claim limitations is improper**

Claim 4 recites "wherein said preprocessing and said blemish elimination processing are **stopped in accordance with said evaluated result**." Claim 5 recites "wherein said preprocessing **comprises production of flag information which indicates the presence or absence of the defect** on a pixel unit basis from the defective image." The evaluated result of claim 4 which in used to determine the stopping of preprocessing and blemish elimination processing is a distinctly different feature from "the flag information" which is produced by the preprocessing.

Consequently, the same aspect of a reference should not be cited for teaching distinctly different claim limitations.

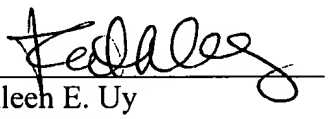
For at least the above reasons and those set forth in the Appeal Brief, claim 1 and its dependent claims should be deemed allowable.

## CONCLUSION

For the above reasons as well as the reasons set forth in Appeal Brief, Appellant respectfully requests that the Board reverse the Examiner's rejections of all claims on Appeal.

An early and favorable decision on the merits of this Appeal is respectfully requested.

Respectfully submitted,



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